

REMARKS

The above amendments and these remarks are responsive to the Office action dated September 16, 2005. Claims 1-12 are pending in the application. Claims 1-12 are rejected. By way of the present amendment, claims 1, 2, 11 and 12 are amended, and new claims 14-16 are added.

In view of the amendments above, and the remarks below, Applicants respectfully request reconsideration of the rejected claims under 37 C.F.R. § 1.111.

Information Disclosure Statement

Applicants thank the Examiner for considering the information disclosure statements submitted on March 8, 2004 and August 11, 2005.

The Examiner indicates that the Information Disclosure Statement filed on August 11, 2005 fails to comply with 37 C.F.R. § 1.98(a)(3), because it does not include a concise explanation of the relevance of the Korean Office Action. Applicants hereby provide the Examiner with an English translation of the Korean Office Action previously submitted with the information disclosure statement of August 11, 2005, and request consideration of the previously submitted information disclosure statement. Applicants note that the previous Information Disclosure Statement was timely filed on August 11, 2005.

Objections to the Specification

The Examiner has objected to the specification because the cross-reference to the parent application does not include an issued patent serial number corresponding to application serial no. 09/778,232. Applicants have amended the specification to include a reference to U.S. Patent No. 6,685,794. In view of the above amendments and remarks, Applicants respectfully request the withdrawal of the objection to the specification.

Rejections under 35 USC § 102

Claims 1 and 10 are rejected under 35 U.S.C. § 102(a) as being anticipated by U.S. Patent No. 5,935,331 (Naka et al.). The Examiner suggests that Naka et al. anticipates claim 1, as Naka et al. is directed to an apparatus that comprises a nozzle (130) capable of dispensing adhesive, an electrode means (132) and an electric power supply (134) for generating an electric field between the electrode means and the nozzle. Applicants respectfully disagree.

Instant claim 1 recites "an apparatus for bonding two optical disc substrates together by joining the optical disc substrates together with an adhesive and by curing the adhesive". In contrast, Naka et al. is directed to an apparatus for forming thin films (see col. 1, lines 5-13). In particular, as described at col. 14, lines 23-33 of Naka et al., Fig. 11 depicts an apparatus for electrostatically discharging a solution, not an apparatus for bonding optical disc substrates together. Specifically, Fig. 11 includes an apparatus in which "the solution 130 is discharged from the nozzle 133 toward the coating-object member 131" (column 14, lines 32 and 33). The apparatus of Naka et al. is not disclosed

as being capable of performing the functions recited in claim 1, and therefore Applicants suggest that the device of Naka et al. is distinct from the apparatus of claim 1.

However, without acknowledging the propriety of the objection, Applicants have amended claim 1 to more particularly define their invention. Claim 1, as amended, includes "a joining apparatus for joining one of the optical disc substrates, onto at least one of which the adhesive is supplied, and another one of the optical disc substrates." Support for the amendment is found generally in the specification as filed, and more particularly at page 3, lines 21 to 23; page 12, lines 7 to 12; and at Fig. 4.

Naka et al. only describes "an apparatus in which the solution is discharged from the nozzle toward the coating-object member", and fails to disclose two optical disc substrates, the joining of two optical disc substrates, or any apparatus for joining two optical disc substrates. In order to anticipate a claim, the cited reference must disclose each and every element of the claim. Naka et al. does not have "a joining apparatus" as recited in amended claim 1, and claim 1 is therefore not anticipated by Naka et al.

In addition, the apparatus of Naka et al. fails to disclose the advantageous properties of the claimed apparatus. As indicated at page 3, lines 1-5 of the specification the apparatus of amended claim 1 has the advantageous capability of bonding optical disc substrates while rarely or never generating voids between the optical disc substrates, either when a liquid adhesive is supplied onto the optical disc substrate, or when the two optical disc substrates are bonded together. In contrast, Naka et al. is directed to a technology that has no relation to supplying adhesive for bonding optical disc substrates, or bonding two optical disc substrates to which the adhesive is supplied, and has no

relation to the object of the amended claim 1. Moreover, Naka et al. fails to disclose the advantageous property of preventing the generation of voids between the optical disc substrates.

As claim 10 depends from claim 1, Applicants suggest that claim 10 is not anticipated by Naka et al. for at least the reasons given for claim 1, as amended. Additionally, the Examiner suggests that the recited effect of the electric field in claim 10 is functional language, which should be given little weight. Applicants respectfully disagree, and suggest that functional language must be evaluated and considered, just like any other element of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used (see MPEP 2173.05(g)). In this instance, there is no disclosure in Naka et al. that the electrostatic solution dispenser can “taper an end of a liquid film of the adhesive” in order to reduce initial contact area, as recited in claim 10. For at least these reasons, Applicants suggest that claim 10 is not anticipated by Naka et al.

Claims 11 and 12 stand rejected under 35 U.S.C. 102(e) as being anticipated by Yamaguchi et al. (U.S. Patent 6,494,987).

The Examiner suggests that the language of claims 11 and 12 only requires a device for forming an electric field between two objects, and that the material worked upon (optical disc substrates, adhesive) is not considered part of the apparatus. The Examiner further suggests that the effects of the electric field on the liquid film of adhesive is functional language, which is given little weight. Applicants respectfully disagree, and

suggest that suggest that functional language must be evaluated and considered, just like any other element of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used (see MPEP 2173.05(g)).

Without acknowledging the propriety of the rejection, Applicants have amended claims 11 and 12 to depend from amended claim 1, and claims 11 and 12 therefore include the elements recited in claim 1. The Yamaguchi et al. reference does not disclose "an adhesive-supplying nozzle for supplying the adhesive onto at least one of the optical disc substrates," nor does the reference disclose "an electric power supply for generating an electric field between the electrode means and the adhesive-supplying nozzle" as recited in claim 1. Applicants respectfully suggest that claims 11 and 12, as amended, are not anticipated by the Yamaguchi et al. reference.

In view of the above amendments and remarks, Applicants respectfully request the withdrawal of the rejections of claims 1 and 10-12 under U.S.C. § 102.

Rejections under 35 USC § 103

Claims 2-9 are rejected under 35 USC §103(a) as being unpatentable over Naka et al., as applied to claim 1.

The Examiner suggests that, Naka et al. discloses the apparatus of claim 1, as discussed above, and with regards to claims 2 and 3, that Naka et al teaches that there can be a plurality of nozzles. The Examiner further suggests that it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the claimed arrangement of nozzles in the apparatus of Naka et al. Applicants respectfully disagree.

As discussed above with respect to claim 1, Applicants believe that claim 1, as amended, is not anticipated by Naka et al. In particular, that Naka et al. fails to disclose an apparatus that includes “a joining apparatus for joining one of the optical disc substrates, onto at least one of which the adhesive is supplied, and another one of the optical disc substrates.” Applicants suggest that claim 1 is not rendered *prima facie* obvious by Naka et al., because *prima facie* obviousness cannot be properly established unless each and every element of the rejected claim is found in the cited references.

In addition, also as discussed above, Naka et al. fails to disclose or suggest the advantageous properties demonstrated by the claimed apparatus, that of bonding optical disc substrates while rarely or never generating voids between the optical disc substrates.

As claim 1 is not rendered obvious by the Naka et al. reference, Applicants suggest that claims 2 and 3, which depend from claim 1, are similarly not rendered obvious by the Naka et al. reference, for at least the reasons given for claim 1.

With respect to claims 4-9, as these claims also depend from claim 1, as amended, Applicants suggest they are similarly not rendered obvious by Naka et al., for at least the reasons given for claim 1.

In view of the above amendments and remarks, Applicants respectfully request that the rejections of claims 2 through 9 under 35 U.S.C. § 103 be withdrawn.

Double Patenting

Claims 11 and 12 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 24 of U.S. Patent No. 6,494,987

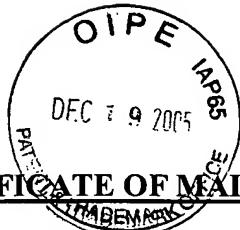
(Yamaguchi et al.). The Examiner suggests that claim 24 of Yamaguchi et al. encompasses claims 11 and 12 of the present application.

Without acknowledging the propriety of the rejection, Applicants have amended claims 11 and 12 to depend from claim 1, as discussed above. Applicants suggest that, as amended, the subject matter of claims 11 and 12 is distinct from the subject matter of claim 24 of Yamaguchi et al.

In view of the above amendments and remarks, Applicants respectfully request the withdrawal of the rejections of claims 11 and 12, under the judicially created doctrine of obviousness-type double patenting.

It is believed that the subject patent application has been placed in condition for allowance, and such action is respectfully requested. If the Examiner has any questions or concerns, or if a telephone interview would in any way advance prosecution of the application, please contact the undersigned agent of record.

The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 11-1540.



CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450 on December 15, 2005.

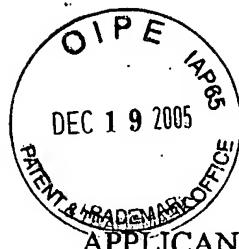
Suzanne Lukas-Werner

Respectfully submitted,

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NOTICE OF PRELIMINARY REJECTION

APPLICANT:

Origin Electric Co., Ltd.

APPLN. No.:

Korean Patent Application No. 10-2001-0006963

TITLE:

METHOD AND APPARATUS FOR BONDING OPTICAL DISC
SUBSTRATES TOGETHER, AND METHOD FOR SUPPLYING
LIQUID MATERIAL

Reasons for Rejection

The subject application cannot be patented pursuant to Articles 29 (2) of the Korean Patent Law because the inventions described in the claims 1 to 21 are considered to be easily conceivable by person skilled in the art from the disclosure of cited reference by following:

1. **Claim 1 of this invention** states a method for bonding two optical disc substrates together comprising the step that the adhesive is supplied by an electric field formed between an adhesive-supplying nozzle and substrate for removing bubbles. However, **US Patent No. 5935331(1999.8.10.; the cited reference 1)** describes a method for forming a thin film that comprising a step that electric field is formed between a nozzle(133) and a coating object substrate(131)(figure 11 and 13 to 15). There is any difference in fields of this invention and the cited reference, but basic idea is identical. Therefore, this invention is easily changeable by person skilled in the art from forming of electric field of the cited reference.
2. **Claims 2 to 5 of this invention** state a method for bonding two optical disc substrates which comprises forming of electric field in substrates and supplying of the adhesive. However, **JP Patent Publication No. 7-228847(1995.8.29.; the cited reference 2)**describes means for giving electric field on object of adhesion in figure 2. And **JP Patent Publication No. 8-293132(1996.11.5.; the cited reference 3)** describes features of forming the adhesive on substrates. Therefore claims 2 to 5 are easily conceivable by the combination of the cited reference 2 and the cited reference 3.
3. **Claim 6** states a method for bonding optical disc substrates together by spin. However, this invention is similar to a method that is described in figure 9 and identification No.[0063] of **JP Patent Publication No. 11-39734(1999.2.12.; the cited reference 4**, a method for preparing a optical record medium). Therefore, this invention

is easily conceivable by diverting a spin coating method from the cited reference 4.

4. **Claims 7 and 8** state a forming of electric field by an alternating current or a direct current, but these forming of electric field correspond to the cited reference 2 and 1 respectively.

5. **Claim 9** relates to an apparatus which a method of claim 1 is expressed as means. Therefore, claim 9 also cannot be patented by rejection 1.

6. **Claim 10** states that the two supplying nozzles are positioned as 180°. However, this feature is similar to a nozzle position of **JP Patent Publication No. 9-265673(1997.10.7.; the cited reference 5)**. Therefore, this claim is easily conceivable by the combination of the cited reference 1 and 5.

7. **Claims 11 to 16** state plural nozzles and an alternating current or a direct current. However, these claims are easily conceivable by person skilled in the art from the cited reference 1 and 2.

8. **Claims 14 to 21** also are easily conceivable by person skilled in the art from the cited references.

Accordingly, claim 1 to 21 of the subject application cannot be patented pursuant to Article 29(2) of the Koreans Patent Law.

Our Comments

As for the rejection

We trust that you are in the best position to formulate arguments necessary to overcome the rejection.

In addition, if you have any domestic or foreign counterpart applications, which have been issued or granted, please provide us with a copy of any Official Gazettes thereof.

If you should have any questions with regard to the Examiner's comments, please do not hesitate to contact us.

We look forward to hearing from you soon on this matter.

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발송일자: 2005.06.27
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135-080

특 허 청 의 견 제 출 통 지 서

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출 원 번 호 10-2001-0006963
발 명 의 명 칭 광디스크기판의 접합방법 과 장치, 및 액상을 절약하는 공급방법



이 출원에 대한 심사결과 아래와 같은 거절이유가 있어 특허법 제63조의 규정에 의하여 이를 통지하오니 의견이 있거나 보정이 필요할 경우에는 상기 제출기일까지 의견서[특허법 시행규칙 별지 제25호의2서식] 또는/및 보정서[특허법시행규칙 별지 제5호서식]를 제출하여 주시기 바랍니다.(상기 제출기일에 대하여 매회 1월 단위로 연장을 신청할 수 있으며, 이 신청에 대하여 별도의 기간연장승인통지는 하지 않습니다.)

[이유]

이 출원의 특허청구범위 제1항 내지 제21항에 기재된 발명은 그 출원전에 이 발명이 속하는 기술분야에서 통상의 지식을 가진 자가 아래에 지적한 것에 의하여 용이하게 발명할 수 있는 것으로 특허법 제29조제2항의 규정에 의하여 특허를 받을 수 없습니다.

[아 래]

1. 청구범위 제1항은 공지된 2매의 광디스크 기판을 접착제로 접합하는 방법에 있어서, 접착제를 공급하는 노즐과 기판 사이에 전계를 형성한 상태로 접착제를 공급하는 과정을 통해 기포를 없애도록 하는 것에 특징이 있는 방법이나, 이와 같은 특징은 미국 특허 제5935331호(1999.8.10.; 인용발명1)의 박막형성방법에 기재된 도면 제11, 13~15도의 노즐(133)과 코팅 대상 판(131) 사이에 전극이 구성되어 전계가 형성되는 기술을 그대로 전용한 정도입니다. 인용발명1과 본 발명의 산업분야에 다소 차이가 있으나, 근본적인 기술사상은 동일합니다.

따라서 본 발명은 당업자가 종래기술에 인용발명1의 전계형성 수단을 전용하여 용이하게 설계변경할 수 있으며, 목적 및 효과도 예측되는 정도입니다.

2. 청구범위 제2항 내지 제5항 역시 2매의 광디스크 기판을 접착하는 방법에 관한 것들로 2매의 판상들에 전계가 형성되는 것과 접착제의 공급 형상에 특징이 있는 발명들이나, 이와 같은 특징들은 일본 특개평 제7-228847호(1995.8.29.; 인용발명2)의 접착

제 및 접착방법에 있어서, 도면 제2도에 기재된 접착하고자 하는 대상(1, 2)에 전계(5)가 가해지는 수단과 접착제가 기판에 형성되는 특징들은 일본 특개평 제8-293132호(1996.11.5.; 인용발명3)의 도면들에 기재된 형상과 동일합니다.

따라서 본 발명들은 당업자가 인용발명2의 수단들과 인용발명3의 접착제 형상을 단순 결합하여 용이하게 발명할 수 있는 정도입니다.

3. 청구범위 제6항은 일방의 기판에 가상원상의 접착제가 공급되고 타방의 기판에는 접착제가 거의 일면에 형성되어 중첩에 의해 스판처리함으로 접착하는 방법에 관한 것이나, 이와 같은 접착방법 역시 일본 특개평 제11-39734호(1999.2.12.; 인용발명4)의 광학기록매체의 제조방법에 있어서, 도면 제9도와 상세한 설명 식별문단기호 [0063]에 기재된 방법과 극히 유사합니다.

따라서 본 발명은 당업자가 인용발명4에 공지된 스팬코팅방법을 전용하여 용이하게 제조할 수 있는 방법입니다.

4. 청구범위 제7항 및 제8항은 전계의 형성이 교류 또는 직류전계에 의해 형성됨을 특징으로 하는 발명이나, 이와 같은 전계형성은 인용발명2, 1에 각각 대응되는 것으로 동일한 수단들입니다.

5. 청구범위 제9항은 제1항의 방법을 구동되는 수단으로 표현한 접합장치에 관한 것이나, 이와 같은 장치 역시 상기 거절이유1에 의해 그 진보성을 인정할 수 없습니다.

6. 청구범위 제10항은 공급노즐 2개가 180° 로 위치하는 것에 특징이 있는 발명이나, 이와 같은 특징 역시 일본 특개평 제9-265673호(1997.10.7.; 인용발명5)의 노즐 위치와 동일합니다.

따라서 본 발명은 당업자가 인용발명1에 인용발명5의 노즐위치를 전용하여 용이하게 설계변경할 수 있는 정도이며, 목적 및 효과는 예측되는 정도입니다.

7. 청구범위 제11항 내재 제13항은 노즐이 복수개인 것과 전원이 교류 또는 직류인 것에 특징이 있는 발명들이나, 이와 같은 특징들 역시 당업자가 인용발명1, 2에 의하여 용이하게 구성할 수 있는 정도입니다.

8. 청구범위 제14항 내지 제21항들은 역시 상기 인용발명들에 의하여 당업자가 용이하게 발명할 수 있는 정도입니다.

그러므로 상기 청구항들은 특허법 제29조 제2항에 해당됩니다.

[첨 부]

첨부1 미국특허공보 05935331호(1999.08.10) 1부.

첨부2 일본공개특허공보 평07-228847호(1995.08.29) 1부.
첨부3 일본공개특허공보 평08-293132호(1996.11.05) 1부.
첨부4 일본공개특허공보 평11-039734호(1999.02.12) 1부.
첨부5 일본공개특허공보 평09-265673호(1997.10.07) 1부. 끝.

2005.06.27

특허청

전기전자심사국
정보심사담당관실

심사관

장현숙



<< 안내 >>

명세서 또는 도면 등의 보정서를 전자문서로 제출할 경우 매건 3,000원, 서면으로 제출할 경우 매건 13,000원의 보정료를 납부하여야 합니다.

보정료는 접수번호를 부여받아 이를 납부자번호로 "특허법 실용신안법·의장법 및 상표법에 의한 특허료·등록료와 수수료의 징수규칙" 별지 제1호서식에 기재하여, 접수번호를 부여받은 날의 다음 날까지 납부하여야 합니다. 다만, 날부일이 공휴일(토요일·일요일을 포함한다)에 해당하는 경우에는 그날 이후의 첫 번째 근무일까지 납부하여야 합니다.

보정료는 국고수납은행(대부분의 시중은행)에 납부하거나, 인터넷으로(www.giro.go.kr)로 납부할 수 있습니다. 다만, 보정서를 우편으로 제출하는 경우에는 보정료에 상응하는 통상환을 동봉하여 제출하시면 특허청에서 납부해드립니다.

문의사항이 있으시면 ☎042-481-5404로 문의하시기 바랍니다. 서식 또는 절차에 대하여는 특허고객 쿨센터(☎1544-8080)로 문의하시기 바랍니다.